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## Hardiness Training and Perceived Stress among College Students

Kurosh Mohamadi Hasel<sup>a\*</sup>, Amir Abdolhoseini<sup>b</sup>, Puyesh Ganji<sup>c</sup>

<sup>a</sup>Department of Psychology, University of Tehran, Tehran, Iran

<sup>b</sup>Department of psychology, University of Payame-Noor, Iran

<sup>c</sup>Department of Psychology, University of Tehran, Tehran, Iran

### Abstract

This exploratory study investigated development of a model hardiness training program to determine whether perceived stress could be reduced and hardiness could be increased among college students. Twenty seven college student volunteers placed in experiment group, and twenty nine placed in witness group. The participants completed pretests for hardiness and perceived stress measures. Then experiment group received a six-week hardiness training program. Posttests were completed after the 6 weeks. Changes in hardiness scores were significant ( $p < .01$ ). there were also a significant change between pretest and posttest scores of perceived stress ( $p < 0.01$ ), indicating that hardiness training program had increased hardiness levels and decreased perceived stress levels at the same time. Findings suggest that the use of a hardiness training program can be effective in increasing hardiness and decreasing perceived stress levels in students and may have a positive impact on them.

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### 1. Introduction

In recent years, the field of positive psychology has emerged to bring awareness to the role of psychology in making life more fulfilling, enhancing human functioning, and decreasing stress. It is well documented that psychological stress is associated with a variety of physical and mental health illnesses (eg, Hystad, Eid, Laberg, Johnsen, & Bartone, 2009). However, the magnitude of these correlations is moderate, suggesting that stress accounts for only a portion of the variance in illness. Such data have led researchers to conclude that stress does not inevitably lead to illness (Wiebe & McCallum, 1986). As a result, research has focused on identifying those factors that have direct, indirect or modifying effects on illness. There has been increasing interest in individuals' responses in managing life's adversities. The link between adverse or stressful life events and psychological and physical health has been well established, and many studies report that stressful life events precipitate ill-health and psychological dysfunction.

Although consistent, this relation is small. One approach to understanding this small but reliable association has been the examination of moderator variables: characteristics of persons or their environments that make them more or less vulnerable to the negative effects of stressful events. Hardiness (Kobasa, 1982) is one such moderator variable and has been a major aspect of the recent resurgence of interest in the role of personality factors in health. It

\* Kurosh Mohamadi. Tel.: +98-261-6458296  
E-mail address: kurosh\_hasel@alumni.ut.ac.ir.

is clear that some individuals experience a high level of life stress without their physical or psychological health being compromised.

In the late 1970s Kobasa (1979) introduced the concept of psychological hardiness and suggested that hardiness moderates the relationship between stressful life events and illness. Personality hardiness has emerged as a composite of the interrelated attitudes of commitment, control, and challenge that provides the existential courage (Maddi, 2004) and motivation needed in turning stressful circumstances from potential disasters into growth opportunities (Maddi, 2002, 2004; Maddi, Harvey, et al., 2006). Those who are strong in the commitment attitude get involved rather than withdraw, perceiving this as the best way to turn the stressful experience into something that seems noteworthy. Those strong in the control attitude believe that through effort, they can more often than not influence what is going on around them rather than perceiving themselves as powerless in the face of circumstances. Those strong in the challenge attitude believe that fulfillment is to be found not in easy comfort, security, and routine but rather in the continual growth in wisdom through what is learned from the negative and positive experiences of an active life. As existential courage, hardiness is a sign of mental health and has expanded the emphasis of positive psychology beyond mere happiness (Maddi, 2006).

The personality construct hardiness has emerged as an important factor in buffering, or offering resistance toward, the effects of stress (Maddi, 1999). Hardiness studies have found that individuals possessing hardiness traits do not give up easily under pressure, become ill less often, and have the ability to behave in an adaptive manner when stress is experienced (Kobasa, Maddi, & Kahn, 1982).

Importantly, some individuals undergoing life change or facing traumatic events exhibit no psychological disturbances. They appear well adjusted despite enduring tremendous stress or immense hardship. Psychological well-being may be promoted, and immunity may be increased by adapting some psychological strategies. There may be a number of factors which are assumed to control the susceptibility to various types of mental or psychological problems and among them hardiness appear to be of greatest importance.

Several studies have reported that hardiness can be taught. For example, Tierney and Lavelle (1997) used a training module to educate nurses about the benefits of having high hardiness levels, and Judkins and Ingram (2002) used a self-paced module approach among nurse managers. In each case, hardiness scores increased significantly. Similar results were found by Maddi (1987) and Rowe (1999).

These studies indicate that effects of stress tend to be mediated among individuals with high hardiness levels and that hardiness can be learned. However, further investigation was needed to confirm the benefits of hardiness training.

## **2. Method**

### *2.1. Participants and Procedure*

A total of 56 (32 female and 24 male) volunteer students participated in the study. Of them 27 students recruited into experiment group and 29 into witness group.

After a review of the literature, key content for the hardiness training was determined to include hardiness, stress management, adaptive coping strategies, healthy communication, conflict management, and problem-focused resolution.

The intervention was provided to participants over multiple sessions with measures of the Hardiness Scale and the Perceived Stress Scale taken in a pretest/posttest format. Students in experiment group first completed the pretest and then attended 2-hour sessions once a week for 6 weeks, followed by posttest after the sixth sessions.

Hardiness training sessions included key content previously mentioned and the use of real-life case scenarios. We concentrated on problem-resolution skills and paid specific attention to the identification of core problems and the reframing of the issues within the scenarios. By using a reframing focus, locus of control was concentrated internally and stress provoking situations became less focused on reducing the stress and more focused on resolving the problem.

Due to the exploratory nature of the study, effectiveness was assessed using measures of hardiness and stress in a pretest/posttest design.

## 2.2. Measures

**Hardiness Scale (HS;** Besharat, 2007) consists of 45 items related to the three hypothesized factors of hardiness: control, commitment, and challenge. Each item is in the form of a statement to which participants respond by indicating on a four-point scale. These 45 items are summed to give a single score for the hardiness. Alpha coefficients in an Iranian college-student sample have been documented between .88 and .93 for commitment subscale, .85 and .94 for control subscale, .89 and .95 for challenge subscale, and between .87 and .94 for total score of hardiness. These coefficients represent a good internal consistency for the scale. Test-retest coefficient (interval between 2 and 4 weeks) was .82 to .90 for commitment, .80 to .88 for control, .79 to .87 for challenge and .80 to .88 for total score of hardiness. The test correlated positively with mental health and positive/negative perfectionism scales.

**Perceived Stress Scale (PSS)** (Cohen, Kamarck, & Mermelstein, 1983), which is a 14-item scale designed to measure the degree to which respondents find their lives unpredictable, uncontrollable, and overloaded. Responses were given on a 5-point Likert-type scale, ranging from 0 (never) to 4 (very often), with higher scores indicating higher levels of stress. The average Cronbach alpha coefficient reliability was .85. Reliability was found to be consistent between male and female respondents and among age differences.

## 3. Results

As it can be seen in table 1 the program included 56 participants. The experiment group included 12 male and 15 female students and control group included 12 male and 17 female students. Male students included 41% of all participants and female students 57% of them. The average ages of both groups were around 21.

Table 1. Descriptive statistics: gender and age across the groups

Groups	Gender		Age	
	Male	Female	Mean	std
Experiment group	12 (44.4%)	15 (55.6%)	21.81	2.09
Witness group	12 (41.4%)	17 (58.6%)	21.52	2.06
<b>Total</b>	24 (42.9%)	32 (57.1%)	21.66	2.06

Table 2 shows the pretest and posttest mean scores of experiment and witness groups. At the beginning (pretest), witness group had higher levels of hardiness (M= 110.24) and lower levels of perceived stress (M= 29.66) in comparison with experiment group (M= 61.16 and 36.37 respectively). After hardiness training intervention (posttest), witness group already had higher levels of hardiness (M=108.17) and lower levels of perceived stress (M= 31.86) in comparison with experiment group (M= 70.89 and 32.74 respectively), but between group differences had decreased after hardiness training intervention.

Table 2. Pre-test and post-test means across groups

Variables	Experiment group		Control group	
	Pre-test mean	Post test mean	Pretest mean	Post-test mean
Challenge	20.85	25.22	41.31	40.69
Commitment	25.81	29.37	31.56	31.34
Control	14.52	16.3	37.34	36.14
<b>Hardiness Total</b>	61.19	70.89	110.24	108.17
<b>Perceived stress</b>	37.44	32.74	19.31	20.79

Change scores computed by subtracting each participant's pretest score from his/her posttest score. Table 3 depicts mean change scores for all variables and t test results. The table shows that hardiness levels of experiment group had increased ( $t= 10.703$ ,  $P<.01$ ) and perceived stress levels had decreased ( $t= -5.307$ ,  $P<0.01$ ) after the hardiness training intervention. The test results also showed that challenge scores ( $t= 6.88$ ,  $P<.01$ ), control scores ( $t= 6.056$ ,  $P<.01$ ) and commitment scores ( $t= 6.88$ ,  $P<.01$ ) had increased after the intervention.

Table 3. depicts change score means and t test results for equality of means

Variables	Means		t- test for equality of means		
	Experiment group	Witness group	t	df	p
Challenge changes	4.73	-0.62	7.606	54	0.01
Control changes	1.78	-1.21	6.88	54	0.01
Commitment changes	3.56	-0.24	6.056	54	0.01
Hardiness total changes	9.7	-2.7	10.703	54	0.01
Perceived stress changes	-4.7	2.21	-5.307	54	0.01

#### 4. Discussion

This study examined whether a hardiness training model could increase hardiness levels among college students. It also examined the effect of hardiness training program on perceived stress. Results indicate the hardiness training program had some measure of influence on hardiness and perceived stress scores.

Findings from this study are consistent with other studies. Maddi, Harvey, Khoshaba, Fazel & Resurreccion, 2009; Judkins and Ingram (2002) and Tierney and Lavelle (1997) found use of an educational offering to be effective in increasing hardiness levels. Further, using a longitudinal approach, Maddi (1987) and Rowe (1999) reported sustained increased hardiness over 6 to 24 months following periodic training sessions.

As indicated previously, hardiness is comprised of three sub-related concepts: control, commitment, and challenge (Maddi & Khoshaba, 1994). Control, which is measured by the absence of powerlessness that an individual feels (Bigbee, 1985), refers to the belief that one can control or influence occurrences in one's life, that personal efforts can modify stressors so as to reduce them into a more manageable state (Maddi & Kobasa, 1984; Pollock, 1989; Tartasky, 1993), or that a contingency exists between one's actions and external events (Sullivan, 1993). Commitment is reflected in the ability to feel actively involved with others and a belief in the truth, value, and importance of one's self and one's experience (Huang, 1995). Challenge, reflects the belief that change is not a threat to personal security, but an opportunity for personal development and growth (Maddi & Kobasa, 1984; Tartasky, 1993). Indicated by the absence of a need for security, it represents the individual's positive attitude toward change and the belief that one can profit from failure as well as success (Brooks, 1994).

Theoretically, hardiness develops in early childhood and emerges as the result of rich, varied, and rewarding life experiences (Maddi & Kobasa, 1984). According to Kobasa (1979a), the effects of hardiness on mental health are mediated by the individual's cognitive appraisal of a stressful situation and his/her repertoire of coping strategies. Specifically, hardiness alters two appraisal components: it reduces the appraisal of threat and increases one's expectations that coping efforts will be successful (Tartasky, 1993). Hardiness has also been shown to be associated with the individual's use of active, problem-focused coping strategies for dealing with stressful events (Kobasa, 1982). These two mechanisms are, in turn, hypothesized to reduce the amount of psychological distress one experiences.

Because high hardiness levels enable individuals to transform difficult life events into opportunities for increased meaning in life (Schwab, 1996), the hardiness training appeared to be successful in providing the knowledge

necessary to promote hardiness among this group. This transformational process decreased perceived stress levels among the students.

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